

REMARKS/ARGUMENTS

The Final Office Action dated July 10, 2008 and the references cited therein have been carefully considered. In response to the Office Action, Applicant has amended Claims 1 and 7, which, when considered with the remarks set forth below, are deemed to place the case with Claims 1-13 in condition for allowance.

In the Office Action, Claims 1-6 and 10-12 have been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 3,905,740 to Lovejoy et al. and Claims 1-9 and 11-13 have been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 3,433,299 to McDonald. The Examiner states that the Lovejoy patent teaches an injection mold for making open-topped plastic articles, wherein the mold includes independently slidable side wall members for forming the side walls of the part. The Examiner cites the McDonald patent as disclosing a similar mold including a core part and a first mold part, that are movable together in a first direction, and movable side wall parts, that are movable together in a second direction, for forming a part having a bottom side wall and an open top. The Examiner further states that the central core part (21), the second core part (50) and the movable wall parts (42, 44, 46 and 48) define a mold cavity wherein the second core parts (50) are disposed between the central core part (21) and the movable wall parts (42, 44, 46 and 48).

Amended Claim 1

In response, Applicant has amended Claim 1 to define a slidable rigid wall part moveable within a mold cavity with the mold cavity in a closed position. It is respectfully submitted that neither of the cited prior art references, taken alone or combined, teaches or suggests a slidable rigid wall part movable within a closed mold cavity, as defined in amended Claim 1.

In the mold as defined in amended Claim 1, the slides can move while the mold is in a closed position, wherein the mold cavity or cavities are closed to the environment. This means that during injection of plastic, the mold cavity is larger than the actual product which is to be molded. Only then, after injection of the plastic, the slide(s) is/are moved forward.

In contrast, the Lovejoy patent discloses a molding apparatus with a collapsible core. This is a well known principle for injection molding products that have undercuts, insufficient draft or the like, such that they can not otherwise be released from the core. In the Lovejoy patent, however, the collapsible core can only collapse after opening of the mold. This means that, in an injection cycle, when the mold is first closed, the collapsible core is brought into its most expanded, product forming shape. Only after closing the mold, in which the mold cavity has the product forming shape and volume because of the fully extended collapsible core, the plastic is (and can be) injected into the mold cavity. Thus, the apparatus described in the Lovejoy patent is very different from that defined in amended Claim 1.

Furthermore, the Lovejoy patent does not give any motivation to one skilled in the art to make amendments to the construction of the disclosed mold. Specifically, there is no suggestion in this patent for moving the collapsible core parts within the closed mold cavity, nor is there any mention of any benefits that could be achieved with such construction. Also, the Lovejoy patent fails to disclose any control means for movement of the slides within the cavity in the manner defined in Claim 1. Therefore, it is respectfully submitted that Claim 1 and the claims that depend therefrom patentably distinguish over the Lovejoy patent.

Turning to the cited McDonald patent, this patent also discloses a mold with a collapsible core, be it in a different configuration, for manufacturing products that can not otherwise be released from the mold. Again, however, the mold cavity disclosed in the McDonald patent has to be formed first, in its product forming shape and dimensions, before the plastic can be injected into the cavity. Should the molding process vary in any way from that disclosed in the McDonald patent, the product could not be formed.

For example, should the slides (50) be moved from a retracted position to a forward position after injection of the plastic, then the plastic would flow out of the cavity along the block(s) into the open area around the piston rod (66), and/or the plastic would get caught between the sloping surface of the nose of block (21) and the face facing the block of the slide (50). This would obviously result in the formation of improper products (i.e., the products would have flares, for example, and a wall where the slides (50) can not properly meet the nose of block (21)).

Also, in the McDonald patent, the mold cavity has to be closed fully before injecting plastic. As can be seen from Fig. 3 of the McDonald patent, it is again impossible to move any wall part of the cavity when the mold is closed. In this sense, it should be noted that the title of the McDonald patent is "Locking Mechanism for Diecasting." Thus, the objective of the apparatus disclosed in the McDonald patent is to lock all movable parts in place by closing the mold, thereby preventing them to be moved during injection of the plastic. Such objective clearly teaches away from way from the present invention. Therefore, it is respectfully submitted that Claim 1 and the claims that depend therefrom also patentably distinguish over the McDonald patent.

Amended Claim 7

Applicant has also amended Claim 7 to define a mold having a central core part of a first mold part and a movable wall part disposed on opposite sides of a second core part of a second mold part, such that the moveable wall part is located at a side of the second core part facing away from the central core part. Claim 7 has been further amended to define a flow path for plastic between the central core part, the second core part and the moveable wall part, when the moveable wall part is in the first, retracted position, and wherein the movable wall part is movable into the flow path against the plastic in the direction of the central core to the second, extended position. It is respectfully submitted that neither of the cited prior art references, taken alone or combined, discloses these newly added features of amended Claim 7.

In particular, neither the Lovejoy nor the McDonald patent discloses a mold having a central core part and a movable wall part disposed on opposite sides of a second core part, as defined in amended Claim 7. In this regard, it is noted that only the McDonald patent has been cited against previously presented Claim 7. Thus, it can be concluded that the Examiner agrees that the Lovejoy patent does not disclose the features of Claim 7.

Turning to the McDonald patent, it is clear from the drawings of this patent that the elements that the Examiner considers a central core part (21) and a movable wall part (42, 44) are not disposed on opposite sides of the element the Examiner considers a second core part (50). Instead, and as a necessity to the function of the mold disclosed in the McDonald patent, the central core part (21), the movable wall part (42, 44) and the second core part (50)

all meet at a mutual corner in order to properly form a product. Thus, the McDonald patent does not disclose a mold having a central core part and a movable wall part disposed on opposite sides of a second core part, as defined in amended Claim 7.

As mentioned above, Claim 7 has also been amended to replace the previously set forth intended use language with positively cited structural limitations. In particular, Claim 7 has been amended to positively define a flow path for plastic between the central core part, the second core part and the moveable wall part, when the moveable wall part is in the first, retracted position, and wherein the movable wall part is movable into the flow path against the plastic in the direction of the central core to the second, extended position. The McDonald patent does not disclose these additional limitations added to amended Claim 7.

Accordingly, for all of the foregoing reasons, it is respectfully submitted that amended Claim 7 patentably distinguishes over the prior art.

In view of the foregoing amendment and remarks, favorable consideration and allowance of the application with Claims 1-13 are respectfully solicited. If the Examiner believes that a telephone interview would assist in moving the application toward allowance, he is respectfully invited to contact the Applicant's attorney at the telephone number listed below.

Respectfully submitted,



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